

WHAT IS CLAIMED AS NEW AND IS INTENDED TO BE SECURED BY LETTERS

PATENT IS:

1. An oligomer mixture of n-propylethoxysiloxanes, containing from 80 to 100% by weight of n-propylethoxysiloxanes having a degree of oligomerization ranging from 2 to 6.

5 2. The oligomer mixture as claimed in Claim 1, wherein from 90 to 100% by weight of the n-propylethoxysiloxanes present in the oligomer mixture have a degree of oligomerization ranging from 3 to 6.

3. The oligomer mixture as claimed in Claim 1, which contains at least 95% by weight of n-propylethoxysiloxanes having a degree of oligomerization ranging from 2 to 6.

10 4. The oligomer mixture as claimed in Claim 3, which contains at least 95% by weight of n-propylethoxysiloxanes having a degree of oligomerization ranging from 3 to 6.

5. The oligomer mixture as claimed in Claim 1, which contains from 0 to 30% by weight of n-propylethoxysiloxane having a degree of oligomerization n of 2.

15 6. The oligomer mixture as claimed in Claim 1, which contains from 10 to 40% by weight of n-propylethoxysiloxanes possessing an M_2D and/or D_3 structure.

7. The oligomer mixture as claimed in Claim 1, which contains from 30 to 60% by weight of n-propylethoxysiloxanes possessing an M_2D_2 and/or M_3T and/or D_4 structure.

8. The oligomer mixture as claimed in Claim 1, which contains from 5 to 30% by weight of n-propylethoxysiloxanes possessing an M_2D_3 and/or M_3DT and/or D_5 structure.

20 9. The oligomer mixture as claimed in Claim 1, which contains from 0.1 to 25% by weight of n-propylethoxysiloxanes possessing an M_2D_4 and/or M_3D_2T and/or M_4T_2 and/or D_5

structure.

10. The oligomer mixture as claimed in Claim 1, which contains less than 10% by weight of n-propylethoxysiloxanes having a degree of oligomerization n of more than 6.

11. The oligomer mixture as claimed in Claim 10, containing less than 5% by weight of n-propylethoxysiloxanes having a degree of oligomerization n of from 7 to 20.

12. The oligomer mixture as claimed in Claim 10, containing less than 1% by weight of n-propylethoxysiloxanes having a degree of oligomerization n of more than 20.

13. The oligomer mixture as claimed in Claim 1, containing $\leq 5\%$ by weight of free ethanol.

14. The oligomer mixture as claimed in Claim 1, having a viscosity of from 3 to 20 mPa s.

15. A process for preparing an oligomer mixture of n-propylethoxysiloxanes as claimed in Claim 1, which comprises:

subjecting n-propyltriethoxysilane or n-propyltrichlorosilane to hydrolysis and condensation in ethanolic solution and in the presence of a hydrolysis and condensation catalyst, with the addition of from 0.65 to 0.85 mol of water per mole of Si at a temperature in the range from 40 to 120°C; and

removing the alcohol and hydrogen chloride from the reaction system.

16. An oligomer mixture of n-propylethoxysiloxanes, which is prepared by the process of Claim 15.

17. A method of repelling water, oil or dirt or preventing bioinfestation and/or corrosion of inorganic surfaces, comprising:

treating the surfaces of inorganic substrates with the oligomer mixture as claimed in Claim 1.

18. The method as claimed in Claim 17, wherein building materials or structures are impregnated with said oligomer mixture.

5 19. A method of treating smooth, porous and/or particulate substrates, comprising:
treating said substrates with the oligomer mixture as claimed in Claim 1.

20. A method of treating inorganic surfaces, comprising:

treating the surfaces of metal, ceramic, building materials and structures of iron,
steel, brick, masonry, natural stone, concrete, lime sandstone, marble, tiles, artificial stone,
10 sheet glass, hollow glass, laminated glass, bridges, roofs and facades with the oligomer
mixture of Claim 1, thereby providing water-, oil-, dirt- and/or paint-repellent properties or
corrosion-prevention or adhesion-promoting treatment of the surfaces.

21. A method of hydrophobicizing materials, comprising:

treating textiles, leather, cellulose products and starch products with the oligomer
15 mixture of Claim 1, thereby hydrophobicizing and surface-modifying said products.

22. A method of coating, comprising:

coating glass fibers and mineral fibers with the oligomer mixture of Claim 1.

23. A binder, comprising the oligomer mixture of Claim 1 alone or in combination
with other binder ingredients.

20 24. A method of surface-modifying fillers, comprising:

treating fillers with the oligomer mixture of Claim 1.

25. A method of improving the rheological properties of dispersions and emulsions,

comprising:

incorporating the oligomer mixture of Claim 1 in dispersions and emulsions.

26. A method of improving the adhesion of organic polymers on inorganic substrates, comprising:

5 adhering the polymer and inorganic substrate in the presence of the oligomer mixture of Claim 1.

27. A release agent, comprising the oligomer mixture of Claim 1.

28. Across-linking agent, comprising the oligomer mixture of Claim 1.

29. A paint or varnish, comprising the oligomer mixture of Claim 1 as an additive.

10 30. The oligomer mixture as claimed in Claim 1 in the form of a concentrate, a dilute alcoholic solution or a solution in hydrocarbons for application.

31. A composition, comprising the oligomer mixture as claimed in Claim 1 together with (i) at least one organoalkoxysilane from the group consisting of alkyl-, vinyl-, aminoorganoalkoxysilanes, glycidyl ether-functional and glycidyloxyalkyl-functional
15 alkoxysilanes, fluoroorgano-functional alkoxysilanes, acryloyl- or methacryloyl-functional alkoxysilanes, mercapto-functional alkoxysilanes, sulfane- or polysulfane-functional alkoxysilanes and/or (ii) at least one organosiloxane from the group consisting of vinyl-
functional siloxanes, glycidyloxyalkyl-functional siloxanes, alkylfunctional siloxanes, methacryloyl-functional siloxanes, fluoroalkyl- and fluoroorganofunctional siloxanes, and
20 also corresponding cocondensates and/or (iii) at least one silicic ester and/or (iv) at least one oligomeric silicic ester.

32. The oligomer mixture as claimed in Claim 1 combined with a hydrolysis and/or

condensation catalyst.

33. An emulsion, comprising the oligomer mixture as claimed in Claim 1 as the oil phase in an aqueous emulsion.

34. A composition, comprising the oligomer mixture as claimed in Claim 1 together with at least one water-dissolved silane cocondensate and/or at least one water-soluble organic fluorine compound and/or at least one water-emulsified silicone wax.

35. A formulation or composition which comprises an oligomer mixture as claimed in Claim 1.

36. A method of treating substrates, which comprises applying a composition or formulation as claimed in Claim 35 to a substrate surface and optionally subjecting it to thermal and/or photochemical after treatment.

37. A layer on a substrate or an impregnation of a substrate prepared as described in Claim 36.

38. A surface-treated substrate prepared as claimed in Claim 36.

39. An article prepared from a surface-treated substrate as claimed in Claim 37.

40. An article prepared from a surface-treated substrate as claimed in Claim 38.